435.36
04/14/99
Rev. 03

# NEW SITE IDENTIFICATION

| Part A – To Be Completed By Observer | |
|---|---|
| 1. Person Initiating Report: Lee Tuott | Phone: 526-7990 |
| Contractor WAG Manager: Doug Kuhns | Phone: 526-8226 |
| 2. Site Title: CPP-102, CPP-103, CPP-104, CPP-105, CPP-106, CPP-107, CPP-108, CPP-109, CPP-110: Abandoned Shallow Injection Wells at INTEC | |

3. Describe the conditions that indicate a possible inactive or unreported waste site. Include location and description of suspicious condition, amount or extent of condition and date observed. A location map and/or diagram identifying the site against controlled survey points or global positioning system descriptors shall be included to help with the site visit. Include any known common names or location descriptors for the waste site.

This new site identification form (NSID) is for 9 shallow injection wells that have been abandoned at INTEC. These wells are identified in the attached correspondence dated 1/3/03 to Piechowski, Idaho Department of Water Resources (IDWR), from Guymon, Director, BBWI Environmental Affairs. This correspondence also indicates that new site identification forms will be submitted and provides information concerning function/description of the wells. The nine shallow injection wells are identified by various names and numbers. For identification purposes in this form, the shallow injection wells are identified by the CERCLA site number; followed by the INEEL well name; the IDWR Record number; then the well name in parentheses. Information on the location of the shallow injection wells, if available, is also provided. Also attached is the IDWR response to Guymon from Duncan, Hydrogeologist IDRW, dated 1/21/03 that concurs with the method of permanent abandonment and identifies the substantive requirements for consideration. The shallow injection wells include:

CPP-102; 4-CPP; #54; (CPP-621-4); Location: NAD 83, Idaho East Zone, State Plane Coordinates: North (ft) 694725.562, East (ft) 452312.041, Elevation (ft) 4917.8 (NAVD 88). This site is north of CERCLA site CPP-45.

CPP-103; no INEEL well number no; possible IDWR well number - #71; (MAH-CA-CT-319); Location: Not Surveyed, located S. of bldg CPP-656 and served bldg CPP-665, an office building planned for D&D. NSID CPP-101 identified a drum near the base of CPP-665.

CPP-104; 19-CPP; #75; (CPP-701); Location: NAD 83, Idaho East Zone, State Plane Coordinates: North (ft) 695855.800, East (ft) 452679.941, Elevation (ft) 4916.2 (NAVD 88). This is near NSID CPP-100, a release associated with the CPP-701 petroleum storage activities.

CPP-105; 20-CPP; #76; (CPP-701-A); Location: NAD 83, Idaho East Zone, State Plane Coordinates: North (ft) 695862.972, East (ft) 452725.276, Elevation (ft) 4917.1 (NAVD 88). This is near NSID CPP-100, a release associated with the CPP-701 petroleum storage activities.

CPP-106; 21-CPP; #77; (CPP-701-B-1); Location: NAD 83, Idaho East Zone, State Plane Coordinates: North (ft) 695856.177, East (ft) 452780.397, Elevation (ft) 4917.1 (NAVD 88). This is near NSID CPP-100, a release associated with the CPP-701 petroleum storage activities.

CPP-107; 22-CPP; #78; (CPP-701-B-2); Location: NAD 83, Idaho East Zone, State Plane Coordinates: North (ft) 695897.335, East (ft) 452796.903, Elevation (ft) 4903.7 (NAVD 88). This is near NSID CPP-100, a release associated with the CPP-701 petroleum storage activities.

CPP-108; 23-CPP; #79; (CPP-701-B-3); Location: NAD 83, Idaho East Zone, State Plane Coordinates: North (ft) 695863.100, East (ft) 452805.827, Elevation (ft) 4917.1 (NAVD 88). This is near NSID CPP-100, a release associated with the CPP-701 petroleum storage activities.

CPP-109; 27-ICPP; #67; (CPP-IDHW-67); Location: Not Surveyed – This shallow injection well is S.W. of CPP-633 and W. of CERCLA site CPP-48, a shallow injection well.

CPP-110; 33-ICPP; no IDWR number; (CPP-607S); Location: Not Surveyed. This shallow injection well no longer exists and was filled with dirt. It was located S. of bldg CPP-607, a D&Ded building. CERCLA site CPP-45 is located to the north of this shallow injection well. See also CERCLA site CPP-102, a well in the proximity of CPP-45.

| Part B – To Be Completed By Contractor WAG Manager |
|---|
| 4. Recommendation: |

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# NEW SITE IDENTIFICATION

☒ This site meets the requirements for an inactive waste site, requires investigation, and should be included in the INEEL FFA/CO Action Plan. Proposed Operable Unit assignment is recommended to be included in the FFA/CO.
WAG: TBD Operable Unit: TBD, following Track I Investigation

☐ This site DOES NOT meet the requirements for an inactive waste site, DOES NOT require investigation and SHOULD NOT be included in the INEEL FFA/CO Action Plan.

5. Basis for the recommendation:

Additional information needs to be provided on these sites to determine what, if any, futher review by CERCLA should be performed. A Track 1 investigation of these sites will facilitate follow-on decisions by the agencies.

The basis for recommendation must include: (1) source description; (2) exposure pathways; (3) potential contaminants of concern; and (4) descriptions of interfaces with other programs, as applicable (e.g., D&D, Facility Operations, etc.)

6. Contractor WAG Manager Certification: I have examined the proposed site and the information submitted in this document and believe the information to be true, accurate, and complete. My recommendation is indicated in Section 4 above.

Name: DJ Kuhns Signature: DJ Kuhns Date: 5-15-03

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# NEW SITE IDENTIFICATION

## Part C – To Be Completed By INEEL FFA/CO WAG Managers

7. WAG Operable Unit:

DOE WAG Manager's Concurrence: ☑ Concur with recommendation. ☐ Do not concur with the recommendation.

Signature: Rachel C. Hall

Date: 8/11/03

EPA WAG Manager's Concurrence: ☑ Concur with recommendation. ☐ Do not concur with the recommendation.

Signature:

Date: 07/08/03

State of Idaho WAG Manager's Concurrence: ☐ Concur with recommendation. ☐ Do not concur with the recommendation.

Signature: Maggie English

Date: 8/4/03

Explanation follows:

## Part D – To Be Completed By The INEEL FFA/CO Responsible Program Managers (RPM's)

8. FFA/CO RPM's Concurrence:

**For DOE-ID**
Name: Kathleen Hain Signature: Kathleen S Hain Date: 8/11/03 ☑ Concur ☐ Do not concur. Explanation follows:

**For EPA Region X**
Name: Wayne Pierre Signature: Wayne Pierre Date: 7/8/03 ☒ Concur ☐ Do not concur. Explanation follows:

**For State of Idaho**
Name: Dean Nygard Signature: Dean Nygard Date: 8/4/03 ☒ Concur ☐ Do not concur. Explanation follows:

CCN 39827

**State of Idaho**
**DEPARTMENT OF WATER RESOURCES**
1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

January 21, 2003

Ronald H. Guymon, Director
Environmental Affairs
Idaho National Engineering and Environmental laboratory
P.O. Box 1625
Idaho Falls, ID 83415-0111

**Re: Response to INEEL Shallow Injection Well Abandonment Plan**

Dear Mr. Guymon,

IDWR has reviewed the INEEL Shallow Injection Well Evaluation and Abandonment Plan, dated January 3, 2003. IDWR concurs with the list of permanently abandoned shallow injection wells in the INEEL Shallow Injection Well Evaluation and Abandonment Plan. IDWR approves the method of permanent abandon according to the INEEL Shallow Injection Well Evaluation and Abandonment Plan for wells outside of CERCLA and RCRA regulation. Wells investigated under the CERCLA and RCRA should be abandoned according to the approved corrective action for each site, but must also meet the substantive requirements listed in IDAPA 37.03.09.025.012.a.

Enclosed is an IDWR well abandonment form. Please submit an abandonment form for each well at the completion of work to Chris Duncan at the address listed above. This will be used to update our records.

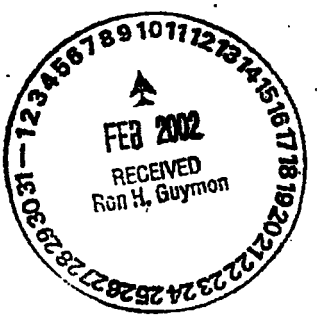
If you have any questions, please call me at (208) 327-7885.

Sincerely,

Chris Duncan,
Hydrogeologist, UIC Program

cc: Mark Slifka, IDWR, Boise

enclosure



January 3, 2003 CCN 35800

Mr. Mike Piechowski
Idaho Department of Water Resources
1301 North Orchard Street
Boise, Idaho 83706-2237

IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY SHALLOW INJECTION WELL EVALUATION AND ABANDONMENT PLAN

Reference: J. F. Graham letter to S. D. Van Hoff, JFG-126-00, Idaho National Engineering and Environmental Laboratory (INEEL) Shallow Injection Abandonment Plan and Inventory Update, November 21, 2000

Dear Mr. Piechowski:

In accordance with the above-referenced letter, Bechtel BWXT Idaho, LLC (BBWI) has completed an initial evaluation of 36 shallow injection wells located at the Idaho National Engineering and Environmental Laboratory that BBWI had proposed to "*evaluate further and prepare abandonment plan.*" This evaluation included wells located at the Idaho Nuclear Technology and Engineering Center, Power Burst Facility, Test Area North, and Test Reactor Area. This evaluation does not include wells located at the Argonne National Laboratory-West.

An evaluation of the status and an abandonment plan for each shallow injection well is presented in the enclosed document. This evaluation shows that several of the wells have already been investigated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), several will be submitted as New Site Identifications under CERCLA, and several have either been permanently or temporarily abandoned. In addition, several wells will be removed from the shallow injection well inventory based on other reasons (e.g., duplicate listings, not meeting the criteria of a shallow injection well).

We are requesting concurrence for those wells listed in the enclosure as being permanently abandoned. We are also requesting approval of the proposed method of permanent abandonment (abandonment plan) for the other wells in accordance with IDAPA 37.03.03.030.04.

If you have any questions regarding this correspondence, please contact Jim Graham at (208) 526-7935 or Bob Montgomery at (208) 526-9339.

Sincerely,

Ronald H. Guymon, Director
Environmental Affairs

SRP:jaj

Enclosure

cc: S. W. Harrison, INEEL, MS 3810 (w/o Enc.)
R. M. Kauffman, DOE-ID, MS 1216
R. C. Nugent, INEEL, MS 3428 (w/o Enc.)
T. L. Perkins, DOE-ID, MS 1216
B. D. Shipp, INEEL, MS 3898 (w/o Enc.)

bcc: R. R. Bone, MS 5117
T. D. Christensen, MS 3810
E. J. Dal Lago, MS 7137
J. M. Espinosa, MS 3427
R. D. Gibby, MS 7137
J. F. Graham, MS 3428
M. J. Graham, MS 3940
D. J. Kuhns, MS 3930
H. S. Lane, MS 4201
M. J. MacConnel, MS 5117
K. L. Miller, MS 5117
R. A. Montgomery, MS 3427
S. R. Pyle, MS 3428
C. A. Reno, MS 4110
S. L. Reno, MS 3915
D. L. Roberts, MS 8108
J. E. Rugg, MS 3428
E. J. Scott, MS 5117
L. C. Tuott, MS 3930
T. E. Venneman, MS 3427
Correspondence Control Center, MS 3106
R. H. Guymon Letter File (RHG-309-03)

Uniform File Code: 6106
Disposition Authority: ENV2-i-1
Retention Schedule: Cutoff at project completion. Destroy 25 years after project completion.
PENDING-DO NOT DESTROY

CCN 35800

# Evaluation and Abandonment Plan for Shallow Injection Wells Located at the Idaho National Engineering and Environmental Laboratory

# CONTENTS



# FIGURES



# TABLES

# Evaluation and Abandonment Plan for Shallow Injection Wells Located at the Idaho National Engineering and Environmental Laboratory

## 1. INTRODUCTION

### 1.1 Background

The Idaho National Engineering and Environmental Laboratory (INEEL) submitted the INEEL Shallow Injection Well Abandonment Plan and Inventory Update (CCN 15473) to the Idaho Department of Water Resources (IDWR) on November 21, 2000. In that correspondence, the INEEL proposed to evaluate and prepare an abandonment plan for several shallow injection wells that had been previously listed as abandoned or temporarily abandoned.

Since the first INEEL Shallow Injection Well Inventory was conducted in 1989 by the IDWR, several wells have been listed as abandoned. Their operational status appears to be consistent with the definition of "abandonment" given in the State's injection well rules at that time: "*Abandonment is the discontinuance of the use of an injection well with the intent not to use the well again in the future.*" There was no definition of "permanent abandonment" at that time. Prior to Bechtel BWXT Idaho, LLC (BBWI)'s contract at the INEEL, several wells at the INEEL were identified on the shallow injection well inventory as having been permanently abandoned. These wells may have been abandoned without formal approval from the IDWR.

The purpose of this document is to provide an update on the status of thirty-six (36) shallow injection wells located at the INEEL which required further evaluation and to request approval of the abandonment plan for the shallow injection wells. Twenty-one (21) of the wells are located at the Idaho Nuclear Technology and Engineering Center (INTEC), one (1) is located at the Power Burst Facility (PBF), two (2) are located at the Test Area North (TAN), and twelve (12) are located at the Test Reactor Area (TRA). This evaluation does not include wells located at the Argonne National Laboratory-West (ANL-W). For those wells which were not in use at the time of the November 21, 2000 submittal, there was question as to whether they met the requirement of "permanent abandonment" (IDAPA 37.03.03.010.32) and "permanently abandon" (IDAPA 37.03.03.030.04).

This evaluation shows that several of the wells have already been investigated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), several will be submitted as New Site Identifications under CERCLA, and several have either been permanently or temporarily abandoned. In addition, several wells will be removed from the shallow injection well inventory based on other reasons (e.g., duplicate listings, not meeting the criteria of a shallow injection well).

This document describes the results of the evaluation, including the current operational status and the proposed abandonment plan for each well. We are requesting concurrence for those wells listed in the attachment as being permanently abandoned. We are also requesting approval of the proposed method of permanent abandonment for the other wells in accordance with IDAPA 37.03.03.030.04.

## 1.2 INEEL Site Description

The INEEL is a U.S. Department of Energy (DOE) facility established by the federal government in 1949 to conduct research and further the development of nuclear reactors and related equipment. Major DOE Programs at the INEEL include test irradiation services, light-water-cooled reactor safety testing and research, operation of research reactors, waste management, and environmental restoration. Various contractors including Bechtel BWXT Idaho LLC., Bechtel Bettis Inc., and Argonne National Laboratory operate the INEEL for DOE. These contractors conduct the various INEEL programs under the administration of three DOE field offices: Idaho Operations Office (DOE-ID), Chicago Operations Office, and the Pittsburgh Naval Reactors Idaho Branch Office.

The INEEL occupies 2,305 $km^2$ (890 $mi^2$) on the northern portion of the Eastern Snake River Plain (ESRP) in southeastern Idaho (Figure 1-1). The eastern boundary of the INEEL is located approximately 51 km (32 mi) west of Idaho Falls. The INEEL is bounded on the northwest by the Lost River, Lemhi, and Beaverhead mountain ranges.

The INEEL is located in a topographically closed drainage basin. Three intermittent streams, the Big Lost River, Little Lost River, and Birch Creek flow onto the INEEL. The Big Lost River is the principal surface water feature on the INEEL. The Snake River Plain Aquifer (SRPA) underlies the INEEL, extending approximately 320 km (200 mi) from Ashton, Idaho, in the northeast to Hagerman, Idaho, on the southwest. The aquifer consists of a series of basalt flows with interbedded sedimentary deposits. The SRPA was designated as a sole-source aquifer by the EPA (56 FR 50634, October 7, 1991) because it is the only viable source of drinking water for many communities on the ESRP.

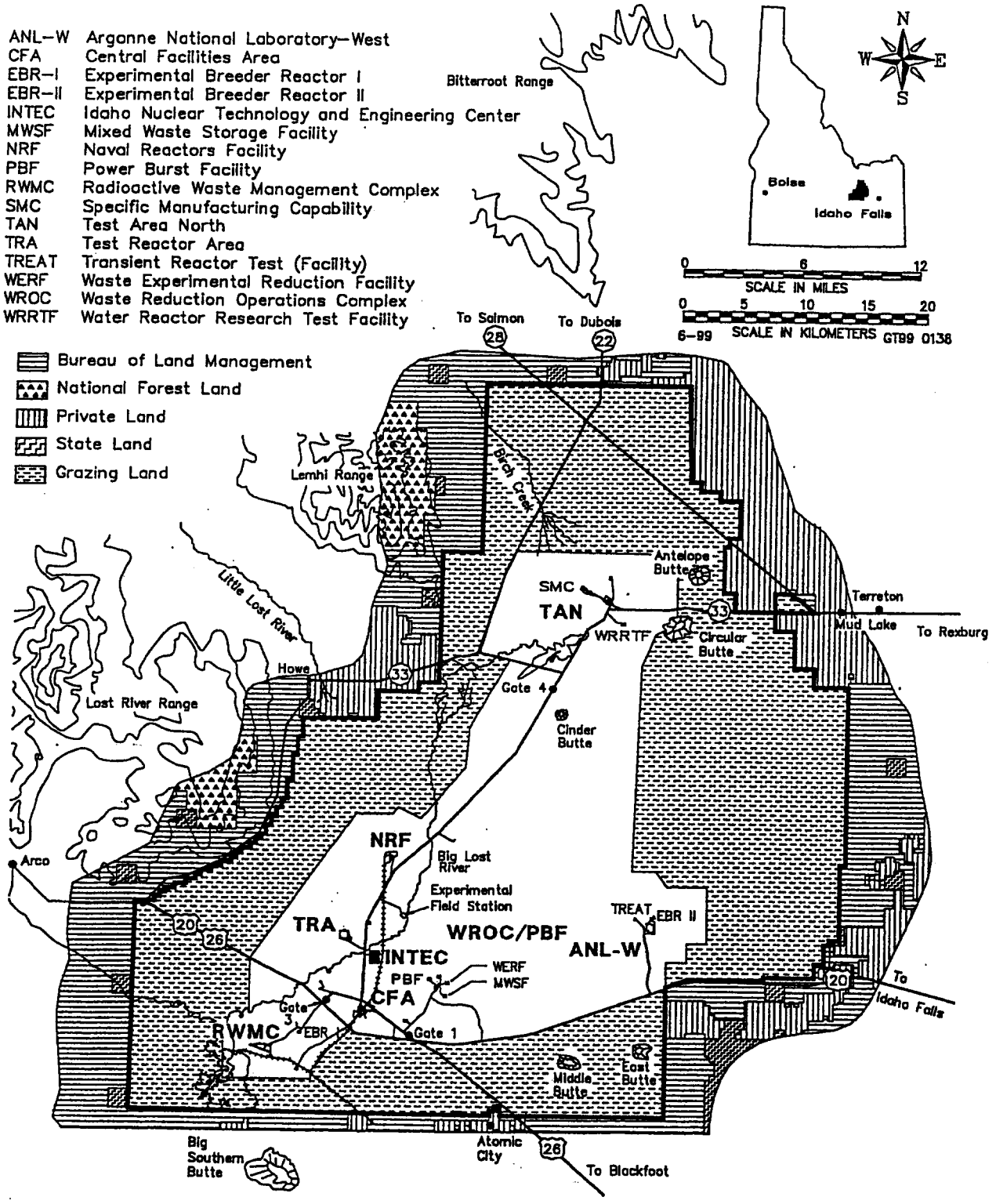



**Figure 1-1.** Idaho National Engineering and Environmental Laboratory and major facilities.

# 2. EVALUATION OF SHALLOW INJECTION WELLS

## 2.1 Solid Waste Management Units

The INEEL has determined that shallow injection wells that have systematically received solid waste such as, but not limited to, boiler blowdown and steam condensate, meet the definition of a solid waste management unit (SWMU) under the Resource Conservation and Recovery Act (RCRA) and are subject to investigation under CERCLA or the RCRA Corrective Action program under Module 5 of the INEEL RCRA Part B Permit. A shallow injection well that has received only stormwater discharges or other environmental media is not a SWMU and is not subject to RCRA Corrective Action.

For each of the shallow injection wells identified in Table 2-1 that meet the definition of a SWMU, the preferred path is to identify the shallow injection well SWMU as a new site under the Federal Facility Agreement/Consent Order (FFA/CO) that implements the CERCLA process at the INEEL. If the SWMU is not accepted as a new CERCLA site, then the RCRA Corrective Action program will be implemented. In accordance with the FFA/CO for the INEEL, CERCLA response obligations will satisfy the RCRA Corrective Action requirements.

Several of the shallow injection wells have already been evaluated as new sites under CERCLA. These wells were either determined to be No Action sites, No Further Action sites, or Remedial Design/Remedial Action (RD/RA) sites. Several of these wells have been either permanently abandoned or temporarily abandoned. For those wells that have been permanently abandoned, the substantive requirements for permanent abandonment of a shallow injection well are considered to have been met through the identification of applicable or relevant and appropriate requirements. Those wells that were determined to be No Action sites or No Further Action sites and have been temporarily abandoned will be permanently abandoned in accordance with IDAPA 37.03.03.030.04. For those wells that were determined to be RD/RA sites and have been temporarily abandoned, the method of abandonment will be determined under the CERCLA process.

As a result, only those shallow injection well SWMUs that have not been previously investigated under CERCLA will be initiated as New Sites. The process that will take place to investigate a shallow injection well as a newly identified CERCLA site or under RCRA Corrective Action is further described in Section 3.1 New Site Identifications Under CERCLA.

**Table 2-1.** Shallow injection wells at the INEEL requiring further evaluation.

| Record Number Facility | IDWR Record Number | Well Name | Well Location | Function/Description | Status[a] | Further Evaluation/Status/Abandonment Plan |
|---|---|---|---|---|---|---|
| 1-CPP | 51 | CPP-621-1 | S. of CPP 621 | This french drain was used for steam condensate disposal (utilized to steam trace an aluminum nitrate tank). | PA | Evaluation: This well was composed of a french drain system. It underwent total removal and soil excavation prior to installing a stainless steel secondary containment vault for an aluminum nitrate storage tank located south of CPP-621. The french drain holes were backfilled with clean soil. The entire area was leveled and a layer of sand several inches deep was laid down. This french drain was included in the initial assessment of the CPP-621 chemical storage area (CERCLA Site Code CPP-45). The Agencies have determined that Site CPP-45 is a "No Action" site.<br><br>Abandonment plan: This shallow injection well no longer exists and will be removed from the shallow injection well inventory. |
| 2-CPP | 52 | CPP-621-2 | S. of CPP 621 | This french drain was used for steam condensate disposal (utilized to steam trace an aluminum nitrate tank). | PA | Evaluation: This well was composed of a french drain system. It underwent total removal and soil excavation prior to installing a stainless steel secondary containment vault for an aluminum nitrate storage tank located south of CPP-621. The french drain holes were backfilled with clean soil. The entire area was leveled and a layer of sand several inches deep was laid down. This french drain was included in the initial assessment of the CPP-621 chemical storage area (CERCLA Site Code CPP-45). The Agencies have determined that Site CPP-45 is a "No Action" site.<br><br>Abandonment plan: This shallow injection well no longer exists and will be removed from the shallow injection well inventory. |
| 3-CPP | 53 | CPP-621-3 | S. of CPP 621 | This french drain was used for steam condensate disposal (utilized to steam trace an aluminum nitrate tank). | PA | Evaluation: This well was composed of a french drain system. It underwent total removal and soil excavation prior to installing a stainless steel secondary containment vault for an aluminum nitrate storage tank located south of CPP-621. The french drain holes were backfilled with clean soil. The entire area was leveled and a layer of sand several inches deep was laid down. This french drain was included in the initial assessment of the CPP-621 chemical storage area (CERCLA Site Code CPP-45). The Agencies have determined that Site CPP-45 is a "No Action" site.<br><br>Abandonment plan: This shallow injection well no longer exists and will be removed from the shallow injection well inventory. |

[a] AC - Active
IA - Inactive
NA - Not Applicable
PA - Permanently Abandoned
TA - Temporarily Abandoned

| Record Number Facility | IDWR Record Number | Well Name | Well Location | Function/Description | Status[a] | Further Evaluation/Status/Abandonment Plan |
|---|---|---|---|---|---|---|
| 4-CPP | 54 | CPP-621-4 (CPP-621 SI-AT-HB) | S. of CPP 621 just N. of where CPP-607 existed | Concrete vault with french drain for condensate utilized to steam trace a hydrofluoric acid pit. | TA | Evaluation: This well was composed of a french drain system. This well (vault) has been temporarily abandoned (not in use, no plans to ever use). All piping leading to the condensate well was removed in the late 1980's. The well vault has been fitted with a manhole cover.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 5-CPP | 55 | CPP-621-5 | S.E. of CPP 621 | This french drain was used for steam condensate disposal (utilized to steam trace an nitric acid tank) and as overflow disposal from the nitric acid tanks. | PA | Evaluation: This well was composed of a french drain system. It underwent total removal and soil excavation prior to installing a stainless steel secondary containment vault for nitric acid storage tank located southeast of CPP-621. The french drain hole was backfilled. The entire area was leveled and a layer of sand several inches deep was laid down. This french drain was included in the initial assessment of the CPP-621 chemical storage area (CERCLA Site Code CPP-45). The Agencies have determined that Site CPP-45 is a "No Action" site.<br><br>Abandonment plan: This shallow injection well no longer exists and will be removed from the shallow injection well inventory. |
| 6-CPP | 56 | CPP-621-6 | S.E. of CPP 621 | This french drain was used for steam condensate disposal (utilized to steam trace the nitric acid tank) and as overflow disposal from the nitric acid tanks. | PA | Evaluation: This well was composed of a french drain system. It underwent total removal and soil excavation prior to installing a stainless steel secondary containment vault for a nitric acid storage tank located southeast of CPP-621. The french drain hole was backfilled. The entire area was leveled and a layer of sand several inches deep was laid down. This french drain was included in the initial assessment of the CPP-621 chemical storage area (CERCLA Site Code CPP-45). The Agencies have determined that Site CPP-45 is a "No Action" site.<br><br>Abandonment plan: This shallow injection well no longer exists and will be removed from the shallow injection well inventory. |
| 7-CPP | 57 | CPP-639 (CPP-639 DI-PW-SB) | S. of CPP-637/E. of CPP-651 | This dry well (neutralization pit) received overflow from a hydrofluoric (HF) acid tank and limestone neutralization discharge. Additionally, dilute concentrations of boric and nitric acid may also have been discharged to the neutralization pit. | PA | Evaluation: This well has been permanently abandoned. All piping leading to the dry well and the limestone in the dry well was permanently removed in the early 1990's. CPP-1634 was built over the abandoned well site. This dry well was included in the initial assessment of the HF Storage Tank (YDB-105) and Dry Well (CERCLA Site Code CPP-39). Site CPP-39 consisted of a hydrofluoric acid storage tank, a concrete containment vault and a tile line connected to the dry well. The dry well and vault both contained limestone rock to neutralize the hydrofluoric acid. The clay tile pipe was removed in 1993. The Agencies have determined that Site CPP-39 "dry well" is a "No Action" site.<br><br>Abandonment plan: This shallow injection well no longer exists and will be removed from the shallow injection well inventory. |

| Record Number Facility | IDWR Record Number | Well Name | Well Location | Function/Description | Status[a] | Further Evaluation/Status/Abandonment Plan |
|---|---|---|---|---|---|---|
| 9-CPP | 59 | CPP-740-1 (MAH-SFE-303 Dry Well) | S.W. of CPP-740 | This dry well received supernatant from a slurry of backwash filter aid material from CPP-603 and potentially received radioactively contaminated basin water. | PA | Evaluation: This is a deep injection well, as defined in IDAPA 37.03.03, and was permanently abandoned. This dry well was included in Track 2 Scope of Work for CERCLA Site Code CPP-01 (referred to as Dry Well CPP-303 in the scoping package). This well was also addressed in the Radioactive Waste Characterization of CPP-603 Cleanup Basin System – System CPP-740 (1981), and the CPP-740 Fuel Storage Basin Cleanup Support System documentation.<br><br>Abandonment Plan: This injection well no longer exists and will be removed from shallow injection well inventory. |
| 10-CPP | 60 | CPP-740-2 (MAH-SFE-SW-048 Dry Well) | E. of CPP-740 | This dry well received supernatant from a slurry of backwash filter aid material from CPP-603 and potentially received radioactively contaminated basin water. | PA | Evaluation: This is a deep injection well, as defined in IDAPA 37.03.03, and was permanently abandoned. This dry well was included in Track 2 Scope of Work for CERCLA Site Code CPP-01 (referred to as CPP-048 in the scoping package). This well was also addressed in the Radioactive Waste Characterization of CPP-603 Cleanup Basin System – System CPP-740 (1981), and the CPP-740 Fuel Storage Basin Cleanup Support System documentation.<br><br>Abandonment Plan: This injection well no longer exists and will be removed from shallow injection well inventory. |
| 11-CPP | 61 | CPP-640 (CPP-40 SI-PW-SB) | S.W. of CPP-601 | This french drain discharge pipe was part of the neutralization unit used to neutralize hydrofluoric acid (HF) and potentially other chemicals from CPP-601 by discharging waste from a drip pan through a drain pipe into a powdered-lime filled pit. The lime pit received HF from around 1960 to 1967. Water may have been discharged to the pit through 1990. | TA | Evaluation: This well is composed of a french drain system and has been temporarily abandoned. All pipes leading to the lime pit were removed in 1991-92. The pit was a fully enclosed concrete structure with metal lid; discharge took place through an overflow line (discharge pipe). The well is currently covered with a metal lid. This well was included in the initial assessment of the "Lime Pit at the Base of CPP-601 Berm and French Drain" (CERCLA Site Code CPP-40). The Agencies have determined that Site CPP-40 is a "No Action" site.<br><br>Abandonment Plan: The shallow injection well has undergone CERCLA investigation with a "No Action" determination. The shallow injection well will be permanently abandoned in accordance with IDAPA 37.03.03.030.04. At the time of permanent abandonment, the shallow injection well will be plugged with bentonite grout, cement grout, concrete, puddling clay, or other impermeable material to prevent the upward or downward migration of fluids. |
| 12-CPP | 62 | CPP-603-1 | Located in or under CPP-603 | This french drain was used in CPP-603 as a building drain and potentially received radioactively contaminated basin water. | TA | Evaluation: This shallow injection well (french drain) is temporarily abandoned. This french drain was abandoned and partially excavated in 1966. The Graphite Fuel Storage Building, an addition to CPP-603, was built over this site. The drain was included in the initial assessment of the "French Drain West of Building CPP-603" (CERCLA Site Code CPP-02). The Agencies have determined that Site CPP-02 is an RD/RA site.<br><br>Abandonment Plan: This shallow injection well is covered under CERCLA Site CPP-02 which is undergoing RD/RA. The method of abandonment will be determined under the CERCLA process. The substantive requirements for abandonment of a shallow injection well as identified in IDAPA 37.03.03.030.04 will be met. |

| Record Number Facility | IDWR Record Number | Well Name | Well Location | Function/Description | Status[a] | Further Evaluation/Status/Abandonment Plan |
|---|---|---|---|---|---|---|
| NA | 71? | MAH-CA-CT-319 | S. of CPP-656 | This well was used for steam condensate disposal. | IA | Evaluation: This shallow injection well (manhole MAH-CA-CT-319) has been located. The well received steam condensate from the heating and ventilation equipment located inside CPP-665 and was placed in inactive status during FY 2002.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 18-CPP | None | CPP-607 (CPP-607 FD-SC-AG) | N. side of CPP-607 | This structure was used for steam condensate disposal. | NA | Evaluation: This structure, along with building CPP-607, no longer exists. It was removed in 1997 when building CPP-607 was removed. Documentation shows that the structure was not a shallow injection well as defined in IDAPA 37.03.03, as the discharge was directly to the ground surface.<br><br>Abandonment Plan: This structure was not a shallow injection well, no longer exists and will be removed from the shallow injection well inventory. |
| 19-CPP | 75 | CPP-701 (CPP-701 SI-AT-SB and MAH-FOS-FL-314) | S. of CPP-701 | This well was used for steam condensate disposal. Passive fuel oil contamination resulting from leaks, spills, etc. | TA | Evaluation: This shallow injection well was temporarily abandoned in 1986. Due to a change in fuel type, the steam line was shut off and the condensate lines were removed. The well is equipped with a metal lid with a hinged door.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 20-CPP | 76 | CPP-701-A (CPP-701-A SI-AT-SB and MAH-FOS-HS-F5) | S.W. of CPP-701-A | This well was used for steam condensate disposal. Passive fuel oil contamination resulting from leaks, spills, etc. | TA | Evaluation: This shallow injection well was temporarily abandoned in 1986. Due to a change in fuel type, the steam line was shut off and the condensate lines were removed. The well is constructed of concrete and is equipped with a metal lid.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 21-CPP | 77 | CPP-701-B-1 (CPP-701-B FD-AT-SB Dry Well) | N.W. of CPP-701-B | This well was used for steam condensate disposal. Passive fuel oil contamination resulting from leaks, spills, etc. | TA | Evaluation: This shallow injection well was temporarily abandoned in 1986. Due to a change in fuel type, the steam line was shut off and the condensate lines were removed. The well is constructed of galvanized metal with a metal lid.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 22-CPP | 78 | CPP-701-B-2 (CPP-701-B SI-AT-SB Dry Well) | S.W. of CPP-701-B | This well was used for steam condensate disposal. Passive fuel oil contamination resulting from leaks, spills, etc. | TA | Evaluation: This shallow injection well was temporarily abandoned in 1986. Due to a change in fuel type, the steam line was shut off and the condensate lines were removed. The well is constructed of galvanized metal with a metal lid.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |

| Record Number Facility | IDWR Record Number | Well Name | Well Location | Function/Description | Status[a] | Further Evaluation/Status/Abandonment Plan |
|---|---|---|---|---|---|---|
| 23-CPP | 79 | CPP-701-B-3 CPP-701-B FD-AT-SB Dry Well) | S.E. of CPP-701-B | This well was used for steam condensate disposal. Passive fuel oil contamination resulting from leaks, spills, etc. | TA | Evaluation: This shallow injection well is temporarily abandoned in 1986. Due to a change in fuel type, the steam line was shut off and the condensate lines were cut off and removed. The well is constructed of galvanized metal with a metal lid.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 27-ICPP | 67 | CPP-IDHW-67 | S.W. of CPP-633, W. of ECA-48 and former CPP-48 well (IDWR Well 58) | This well received steam condensate. | NA | Evaluation: This shallow injection well has been temporarily abandoned. Piping leading to the well has been disconnected and grouted.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 33-ICPP | None | CPP-607S | S side of CPP-607 | Unknown. | PA | Evaluation: This well, along with building CPP-607, no longer exists. This well has been backfilled with soil.<br><br>Abandonment Plan: This well no longer exists and will be removed from the shallow injection well inventory. Since this site meets the definition of a SWMU and has not been previously investigated under CERCLA, it will be evaluated as a CERCLA New Site ID. |
| CPP | None | CPP-48B | NA | NA | NA | Evaluation: No well has been identified at this location other than well number CPP-48 which was removed under CERCLA (Site CPP-48, Well CPP-48, IDWR Well 58), and CPP-IDHW-67. This is a duplicate listing.<br><br>Abandonment Plan: The shallow injection well does not exist (duplicate of CPP-IDHW-67) and will be removed from the shallow injection well inventory. |
| 4-PBF | 44 | PBF 609 | Basement, east side of WERF at base of stairs | This well was used for surface runoff disposal. | TA | Evaluation: This shallow injection well has been temporarily abandoned. With the addition to the SPERT III facility as WERF, a drain plug was placed in the borehole to prevent disposal. The facility does not plan on using this well in the future.<br><br>Abandonment Plan: This shallow injection well received surface runoff discharges and does not qualify as a solid waste management unit (SWMU). This shallow injection well is not subject to RCRA Corrective Action. The well will be permanently abandoned in accordance with IDAPA 37.03.03.030.04. The shallow injection well will be plugged with bentonite grout, cement grout, concrete, puddling clay, or other impermeable material to prevent the upward or downward migration of fluids. |
| 1-TAN | 1 | TAN 702 | S of Fuel Storage tank TAN 702 | This well received steam condensate for disposal from fuel oil tank heating coils. | TA | Evaluation: This shallow injection well was temporarily abandoned over ten years ago. The steam line was shut off and removed.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |

| Record Number Facility | IDWR Record Number | Well Name | Well Location | Function/Description | Status[a] | Further Evaluation/Status/Abandonment Plan |
|---|---|---|---|---|---|---|
| 2-TAN | 2 | TAN 724 | S of Fuel Storage tank TAN 724 | This well received steam condensate for disposal from fuel oil tank heating coils. | TA | Evaluation: This shallow injection well was temporarily abandoned over ten years ago. The steam line was shut off and removed.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 4-TRA | 11 | TRA FD4 | SE Corner of TRA-671 | This structure was used for sulfuric acid overflow disposal. | NA | Evaluation: No shallow injection well has been identified at this location. There is no evidence of the well from previous inspections. Documentation shows that the structure was not a shallow injection well as defined in IDAPA 37.03.03, as the discharge was directly to the ground surface. (past reports indicate a pipe extended from the south wall and discharged directly to the ground surface).<br><br>Abandonment Plan: This structure was not a shallow injection well, no longer exists and will be removed from the shallow injection well inventory. |
| 5-TRA | 12 | TRA FD5 | Floor Drain in TRA-669 | This well was used for steam condensate disposal. | IA | Evaluation: This shallow injection well (floor drain) is no longer used. It was declared permanently inactive in 1991.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 7-TRA | 15 | TRA FD7 | Floor Drain in TRA-673 | This well was used for fire sprinklers drainage disposal. | IA | Evaluation: This shallow injection well (floor drain) is no longer used. The fire sprinkler system has since been removed. The shallow injection well has been permanently inactive in 1991.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 8-TRA | 16 | TRA FD8 | Floor Drain in TRA-674 | This well was used for the Emergency Diesel Building drainage and may have discharged petroleum products. | PA | This shallow injection well (floor drain) is no longer used. The floor drain was plugged with grout in 1991. This well is considered permanently abandoned.<br><br>Abandonment Plan: This shallow injection well has been permanently abandoned and will be removed from the shallow injection well inventory. Since this site meets the definition of a SWMU and has not been previously investigated under CERCLA, it will be evaluated as a CERCLA New Site ID. |
| 13-TRA | 21 | TRA FD13 | NE Corner TRA-614 | This well was used for steam condensate disposal. | IA | Evaluation: This shallow injection well (buried 55-gallon drum) is no longer used. It was declared permanently inactive in 1991. The steam condensate line is still in place.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 14-TRA | 22 | TRA FD14 | NE Corner TRA-616 | This well was used for steam condensate disposal. | TA | Evaluation: This shallow injection well is temporarily abandoned. The steam condensate lines have been removed.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |

| Record Number Facility | IDWR Record Number | Well Name | Well Location | Function/Description | Status[a] | Further Evaluation/Status/Abandonment Plan |
|---|---|---|---|---|---|---|
| 15-TRA | 23 | TRA FD15 | S Side TRA-667 | This well was used for steam condensate disposal. | IA | Evaluation: This shallow injection well is no longer used. The steam condensate piping has not been plugged. The well is considered inactive.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 19-TRA | 27 | TRA FD19 | S Side TRA-727A | This well was used for steam condensate disposal. | TA | Evaluation: This shallow injection well is no longer used. The well has been fitted with a concrete cap and is considered temporarily abandoned.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 20-TRA | None | TRA FD20 | S Side TRA-727B | This well was used for steam condensate disposal. | TA | Evaluation: This shallow injection well is no longer used. The well has been fitted with a concrete cap and is considered temporarily abandoned.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 21-TRA | None | TRA FD21 | N Side TRA-627W | This well was used for steam condensate disposal. | IA | Evaluation: This shallow injection well (buried 55-gallon drum) is no longer used. It was declared permanently inactive in 1991. The steam condensate line is still in place.<br><br>Abandonment Plan: This shallow injection well will be evaluated as a CERCLA New Site ID. The method of abandonment will be determined from the CERCLA process. |
| 22-TRA | None | TRA FD22 | N Side TRA-627E | This well (roof drain) was used for stormwater disposal. | TA | Evaluation: This shallow injection well (buried 55-gallon drum) is no longer used. It has been fitted with a steel plate and is considered temporarily abandoned.<br><br>Abandonment Plan: This shallow injection well received stormwater discharges and does not qualify as a solid waste management unit (SWMU). This shallow injection well is not subject to RCRA Corrective Action. The well will be permanently abandoned in accordance with IDAPA 37.03.03.030.04. At the time of permanent abandonment, the shallow injection well will be plugged with bentonite grout, cement grout, concrete, puddling clay, or other impermeable material to prevent the upward or downward migration of fluids. |
| 23-TRA | None | TRA FD23 | E Side TRA-653 | This sink drain was used for disposal to ground surface. | TA | Evaluation: This shallow injection well has been temporarily abandoned under CERCLA. The well is currently covered with a steel plate. The Agencies have determined that Site TRA-41 is a "No Further Action" site.<br><br>Abandonment Plan: The shallow injection well has undergone CERCLA investigation with a "No Further Action" determination. The shallow injection well will be permanently abandoned in accordance with IDAPA 37.03.03.030.04. At the time of permanent abandonment, the shallow injection well will be plugged with bentonite grout, cement grout, concrete, puddling clay, or other impermeable material to prevent the upward or downward migration of fluids. |

# 3. ABANDONMENT PLAN

## 3.1 New Site Identifications Under CERCLA

As stated in Section 2, each of the shallow injection wells which meet the definition of SWMU and have not already been investigated as a New Site under CERCLA will be submitted as a New Site Identification (NSI) in accordance with current company procedures. Table 3-1 lists those shallow injection wells which have been identified as SWMUs. These SWMUs will be submitted as New Sites under CERCLA. If the SWMU is accepted as an inactive waste site (i.e., determined to meet the criteria of a new CERCLA site) the method of abandonment will be determined from the CERCLA process. The substantive requirements for permanent abandonment of a shallow injection well are considered to have been met through the identification of applicable or relevant and appropriate requirements.

If the SWMU is not accepted as a new CERCLA site, then the SWMU is subject to RCRA Corrective Action under RCRA in lieu of under CERCLA.

During the above process, if a shallow injection well is determined to be a No Action site, No Further Action Site, or is determined to be excluded from the definition of a SWMU, permanent abandonment will be accomplished in accordance with IDAPA 37.03.03.030.04. The shallow injection well will be plugged with bentonite grout, cement grout, concrete, puddling clay, or other impermeable material to prevent the upward or downward migration of fluids. After permanent abandonment is complete, the wells listed in Table 3-1 will be removed from the shallow injection well inventory.

**Table 3-1.** Wells which have been identified as SWMUs.

| Record Number Facility | IDWR Record Number | Well Name |
|---|---|---|
| 4-CPP | 54 | CPP-621-4 (CPP-621 SI-AT-HB) |
| 19-CPP | 75 | CPP-701 (CPP-701 SI-AT-SB and MAH-FOS-FL-314) |
| 20-CPP | 76 | CPP-701-A (CPP-701-A SI-AT-SB and MAH-FOS-HS-F5) |
| 21-CPP | 77 | CPP-701-B-1 (CPP-701-B FD-AT-SB Dry Well) |
| 22-CPP | 78 | CPP-701-B-2 (CPP-701-B SI-AT-SB Dry Well) |
| 23-CPP | 79 | CPP-701-B-3 CPP-701-B FD-AT-SB Dry Well) |
| NA | 717 | MAH-CA-CT-319 |
| 27-ICPP | 67 | CPP-IDHW-67 |
| 33-ICPP[1] | None | CPP-607S |
| 1-TAN | 1 | TAN 702 |
| 2-TAN | 2 | TAN 724 |
| 5-TRA | 12 | TRA FD5 |
| 7-TRA | 15 | TRA FD7 |
| 8-TRA[1] | 16 | TRA FD8 |
| 13-TRA | 21 | TRA FD13 |
| 14-TRA | 22 | TRA FD14 |

| Record Number Facility | IDWR Record Number | Well Name |
|---|---|---|
| 15-TRA | 23 | TRA FD15 |
| 19-TRA | 27 | TRA FD19 |
| 20-TRA | None | TRA FD20 |
| 21-TRA | None | TRA FD21 |

[1] This shallow injection well has been permanently abandoned and will be removed from the shallow injection well inventory. Since this site meets the definition of a SWMU and has not been previously investigated under CERCLA, it will be evaluated as a CERCLA New Site ID.

## 3.2 Wells Previously Investigated Under CERCLA

### 3.2.1 Permanently Abandoned

Several shallow injection wells have been investigated under CERCLA and have been permanently abandoned. For each of the wells that were abandoned, the substantive requirements for permanent abandonment of a shallow injection well are considered to have been met through the identification of applicable or relevant and appropriate requirements. In addition, two of the abandoned wells were identified as deep injection wells as defined in IDAPA 37.03.03. As a result of permanent abandonment, the wells listed in the Table 3-2 will be removed from the shallow injection well inventory.

**Table 3-2.** Wells permanently abandoned.

| Record Number Facility | IDWR Record Number | Well Name |
|---|---|---|
| 1-CPP | 51 | CPP-621-1 |
| 2-CPP | 52 | CPP-621-2 |
| 3-CPP | 53 | CPP-621-3 |
| 5-CPP | 55 | CPP-621-5 |
| 6-CPP | 56 | CPP-621-6 |
| 7-CPP | 57 | CPP-639 (CPP-639 DI-PW-SB) |
| 9-CPP | 59 | CPP-740-1 (MAH-SFE-303 Dry Well) |
| 10-CPP | 60 | CPP-740-2 (MAH-SFE-SW-048 Dry Well) |

### 3.2.2 Temporarily Abandoned

Three shallow injection wells have been investigated under CERCLA and have been temporarily abandoned. For the shallow injection wells that have been determined to be No Action sites or No Further Action sites, permanent abandonment will be accomplished in accordance with IDAPA 37.03.03.030.04. The shallow injection well will be plugged with bentonite grout, cement grout, concrete, puddling clay, or other impermeable material to prevent the upward or downward migration of fluids. After permanent abandonment is complete, the applicable wells listed in Table 3-3 will be removed from the shallow injection well inventory.

For the shallow injection wells that have been evaluated under CERCLA and determined to be RD/RA sites, the method of abandonment will be determined under the CERCLA process. The substantive requirements for permanent abandonment of a shallow injection well will be met through the identification of applicable or relevant and appropriate requirements. After permanent abandonment is complete, the applicable well listed in Table 3-3 will be removed from the shallow injection well inventory.

**Table 3-3.** Wells temporarily abandoned.

| Record Number Facility | IDWR Record Number | Well Name | CERCLA Action |
|---|---|---|---|
| 11-CPP | 61 | CPP-640 (CPP-40 SI-PW-SB) | No Action |
| 12-CPP | 62 | CPP-603-1 | RD/RA |
| 23-TRA | None | TRA FD23 | No Further Action |

## 3.3 Wells Used for Disposal of Environmental Media

### 3.3.1 Wells Excluded from the Definition of a SWMU

A stated in Section 2, a shallow injection well that has received only stormwater discharges or other environmental media is not considered a SWMU and is not subject to RCRA Corrective Action. Temporarily abandoned shallow injection wells that were used at the INEEL for receipt and disposal of environmental media, such as stormwater and surface runoff, are listed in Table 3-4.

Permanent abandonment of these wells will be accomplished in accordance with IDAPA 37.03.03.030.04. The shallow injection well will be plugged with bentonite grout, cement grout, concrete, puddling clay, or other impermeable material to prevent the upward or downward migration of fluids. After permanent abandonment is complete, the two wells listed in Table 3-4 will be removed from the shallow injection well inventory.

**Table 3-4.** Wells which were used for disposal of environmental media.

| Record Number Facility | IDWR Record Number | Well Name | Type of Media |
|---|---|---|---|
| 4-PBF | 44 | PBF 609 | Stormwater |
| 22-TRA | None | TRA FD22 | Stormwater |

## 3.4 Wells as Duplicate Listings

### 3.4.1 Duplicate Listings

The shallow injection wells listed on the November 21, 2000 submittal to the IDWR were evaluated to determine whether they duplicate other well listings. After further evaluation, it was determined that one shallow injection well is a duplicate listing. As a result, the duplicate listing shown in Table 3-5 will be removed from the shallow injection well inventory.

**Table 3-5.** Wells as duplicate listings.

| Record Number Facility | IDWR Record Number | Well Name |
|---|---|---|
| CPP | None | CPP-48B |

### 3.4.2 Physically Removed

The shallow injection wells listed on the November 21, 2000 submittal to the IDWR were evaluated to determine whether they meet the IDAPA 37.03.03.010 definition of a shallow injection well, still existed and/or have been permanently abandoned. After further evaluation, it was determined that some of the listings shown in Table 3-6 were not shallow injection wells and some no longer exist (physically removed and/or permanently abandoned). As a result, these listings will be removed from the shallow injection well inventory.

**Table 3-6.** Wells which no longer exist (physically removed and/or permanently abandoned).

| Record Number Facility | IDWR Record Number | Well Name |
|---|---|---|
| 18 - CPP | None | CPP-607 (CPP-607 FD-SC-AG) |
| 33 - CPP | None | CPP-607S |
| 4 - TRA | 11 | TRA FD4 |
| 8 - TRA | 16 | TRA FD8 |